

The public library catalogue as a social space: Transaction log analysis of user interaction with social discovery systems.

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1. Objectives

The public library catalogue has long acted as an important and fundamental medium between users and their information needs. The traditional goals and objectives of the library catalogue are to enable users to search a library's collection to find items pertaining to specific titles, authors, or subjects. Today's library catalogues are competing against powerful alternatives for information discovery. If the public library catalogue is to continue to have relevance to its users, it needs to move beyond its current inventory model, where all content is designed and controlled by library staff, and client interaction with catalogue content is limited, to a social catalogue, where users can contribute to, and interact with information and with each other. The social catalogue can offer several benefits to public library patrons and staff:

- Users can establish a social space where they share and discuss common reading, listening, and viewing interests;
- Users without easy access to a library branch (e.g., due to illness, limitations to physical mobility, lack of local branch, etc.) can connect to other members of the library and library staff via the catalogue;
- Users can provide a grassroots, democratic "readers' advisory" service, whereby they make recommendations for future reading, for example, based upon shared interests;
- Users can classify items in the catalogue with their own terms (or tags), which may be more reflective of their language and needs than the formal subject headings that are traditionally assigned by library staff;
- Library staff can compile recommended reading/listening/viewing lists based on the discussion and recommendations made by users in the catalogue; and
- Library staff can use the discussions and recommendations provided by the users to inform their purchasing decisions for new items to add to the library collection;

The specific goal of this project is to examine and compare how library users access, use, and interact with two social discovery systems used in two Canadian public library systems. Transaction log analysis will be conducted to answer the following research questions:

- a) How do public library users interact with social discovery systems? Specifically, which enhanced catalogue features do they use, e.g., faceted navigation, user-contributed content such as tagging, reviews, and ratings, sorting features, etc., and with which frequency?

- b) How does usage between the two social discovery systems compare? Specifically, are there commonalities or differences between how public library users use different social discovery systems?
- c) Does the use of social discovery systems change over time? Specifically, is the use of the features in social discovery systems consistent over time?

2. Data collection and analysis methods

The social discovery systems provided by AquaBrowser and BiblioCommons will be examined, commencing May 1, 2010. These two systems were chosen because they are presently the only ones used in public libraries in Canada. The target population of the study will be library users in the Halifax (AquaBrowser) and Edmonton (BiblioCommons) public libraries.

Daily transaction logs of the social discovery systems used by Halifax and Edmonton will be compiled over a four-month period. A transaction log is an electronic record of interactions that have occurred between a system and users of that system. Transaction log analysis (TLA) is a way of collecting data unobtrusively without directly interfacing with the catalogue users and that allows researchers to observe and analyze user behaviours. TLA can provide useful information about how the features of a system are used and can inform decisions about how these features can be improved. Server transaction log entries will be manipulated using Microsoft Excel. Measures logged and examined from both discovery systems will include:

- Number of queries
- Duration of queries
- Type of search used (e.g., basic or advanced)
- Use of relevance ranking features
- Use of sorting features
- Use of tagging features
- Use of posted reviews
- Use of ratings features
- Use of faceted navigation
- Use of corrected spelling features

An ethogram will be designed to categorize and define the behavioural patterns of the users. Examples of categories of behaviour include:

- Search process (Type of search used, e.g., keyword, subject)
- View results (How user chooses to have the system display the results)
- Viewer assistance (Did you mean? Automatic spell check)
- Navigation (Use of faceted navigation)
- User-contributed content (Tagging, ratings, reviews)

The results obtained from the transaction log entries will be compared between the two social discovery systems to determine patterns in user behaviour, and whether this behaviour is consistent over the four-month period of data collection. The idea is to see which features are used most and with which frequency. Since the implementation and maintenance of social discovery systems is costly, it is important for library management to make informed decisions about which system features are the most cost effective and how these features may be better tailored to meet user needs.

3. Relevance to the themes of workshop

This presentation is relevant to the 5th identified topic of the workshop, namely “social tagging and informal knowledge structures augmenting established KOS.” Social discovery systems include three primary social applications, namely, user-contributed social tagging, ratings, and reviews. These user-contributed data can serve as important informal knowledge structures that reflect the needs and culture of the library communities served by the social discovery systems. There has been much discussion about the importance of providing enhanced content and social features in library catalogues to improve the search and discovery experiences of users. What is lacking at present, however, are rigorous usability studies to determine the extent to which the putative benefits of these enhanced catalogues are realized; in other words, do social discovery tools actually enhance the users’ experience and meet their information needs?

